CLAIMS

1. Method for solving an optimization task consisting of a plurality of sub-functions in the control of the operation of the elevator group, in which the optimization task is related to control functions such as allocation of elevator calls in the control of the elevator group in which method a set of plurality of solution alternatives is generated, **characterized** in that

- each sub-function is normalized,
- normalized cost functions of the sub-functions are generated for each solution alternative for solving the optimization task,
- based on the normalized cost functions of the sub-functions, a set of solutions to the optimization task is formed,
- from the set of solutions, the best solution is selected,
- if necessary, a new set of solution alternatives is generated, from which correspondingly the best solution is selected, and
- the apparatus is controlled in accordance with the solution thus selected.

2. Method as defined in claim 1, **characterized** in that the sub-functions are normalized by forming an expectation value and variance of the cost function of the sub-function and that the expectation value is subtracted from the cost function and the difference thus obtained is divided by the square root of the variance.

3. Method as defined in claim 1, **characterized** in that a sample average is used as an approximate value of the expectation value and a sample variance is used as an approximate value of the variance.

4. Method as defined in claim 1, **characterized** in that at least one of the sub-functions is a function of the time spent by an elevator passenger on a trip in an elevator and at least one of the sub-functions is a function of a quantity associated with elevator group control other than the time spent by an elevator passenger on a trip in an elevator.

5. Method as defined in claim 4, **characterized** in that genetic algorithm methods are utilized in the optimization.

6. Method as defined in any one of claims 4-5, **characterized** in that, in the allocation of elevator calls, a first set of solutions is generated, by means of which a sample average and a sample variance are determined.

7. Method as defined in claim 6, **characterized** in that the sample average and variance determined by means of the first set of solutions are used in the calculation of the cost functions of the sub-functions when the cost functions of the sub-functions of later sets of solutions are being determined.

8. Method as defined in claims 4, **characterized** in that weighting coefficients of the sub-functions are taken into account in the cost functions of the sub-functions.

9. Method as defined in claim 8, **characterized** in that the weighting coefficients of the sub-functions have been determined beforehand.